UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,006	10/27/2003	Rajesh S. Madukkarumukumana	P16187	9173

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KONRAD RAYNES VICTOR & MANN LLP
Suite 210
315 S. Beverly Drive
Beverly Hills, CA 90212

EXAMINER
SUN, SCOTT C

ART UNIT	. PAPER NUMBER
2182	

DATE MAILED: 08/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	10/695,006	MADUKKARUMUKUMANA ET AL.
	Examiner	Art Unit
	Scott Sun	2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>07 August 2003</u>.

2a) ☐ This action is **FINAL**.　　　2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-26</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-26</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a) ☐ All　b) ☐ Some * c) ☐ None of:

　　　1. ☐ Certified copies of the priority documents have been received.

　　　2. ☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　　application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　Paper No(s)/Mail Date _____ 4/12/04, 5/2/04

4) ☐ Interview Summary (PTO-413)
　Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Specification

1.   Applicant is reminded of the proper language and format for an abstract of the disclosure.

2.   The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

3.   The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because of the use of legal phraseology, "wherein", in line 6 and line 8. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

5.   Claims 6, 8, 14, 16, 25, and 27 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

6.   Claims 6, 14, and 25 state "copying the metadata" without giving the destination

or source of the copy operation. Therefore it is indefinite what storage systems are

giving/receiving the metadata.

7.   Claims 8, 16, and 27 state "network adapter is a part of a central processing unit

of the host". It is indefinite whether being a part of a CPU of the host means the

network adapter is connected to the microchip that contains the CPU or the network

adapter is within the same microchip as the CPU, or if the CPU's ALU actually perform

functions of the network adapter.

Claim Rejections – 35 USC § 102

8.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
sale in this country, more than one year prior to the date of application for patent in the United States.

9.   Claims 1-3, 9-11, 17-18, and 20-22 are rejected under 35 U.S.C. 102(b) as being

anticipated by Starr, Daryl, D et al. (WO 02/27519 as cited in IDS submitted 5/9/2005)

10.   As per claim 1, Starr discloses:

A method, comprising:

allocating, by a protocol processor, metadata related to a packet in a host memory

(page 10 , lines 19-26)

wherein the host memory is comprised in a host that is coupled to a network adapter

(page 7, lines 13-14, page 7, line 21);

copying the metadata from the host memory to an adapter memory associated with the

network adapter; and (page 10, lines 26-28, page 12, lines 26-29)

processing, by the protocol processor, the copied metadata. (page 10, lines 28-30)

11.   As per claim 9, 17 and 20, the examiner finds these claims different from claim 1

only in statutory category. The references and reasons cited for rejection of claim 1

apply in the same manner as applied to claim 1.

12.   As per claim 2, Starr discloses:

The method of claim 1, wherein the copying further comprises:

fetching the metadata from the host memory in anticipation of a requirement of for

protocol processing of the metadata by the protocol processor (Page 10, lines 26-28;

page 11, lines 1-16)

13.   As per claim 10, 18, and 21, the examiner finds these claims different from claim

2 only in statutory category. The references and reasons cited for rejection of claim 2

apply in the same manner as applied to claim 2.

14.   As per claim 3, Starr discloses:

The method of claim 1, wherein the metadata is stored in a protocol control block of a

transport protocol, (page 10, lines 21-26)

and wherein the protocol control block indicates a state of a session handled by the

protocol processor. (page 11, lines 12-16)

15.   As per claim 11 and 22, the examiner finds these claims different from claim 3

only in statutory category. The references and reasons cited for rejection of claim 3

apply in the same manner as applied to claim 3.

Claim Rejections - 35 USC § 103

16.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
such that the subject matter as a whole would have been obvious at the time the invention was made to a
person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived
by the manner in which the invention was made.

17.   Claims 4, 5, 7, 12, 13, 15, 19, 23, 24, and 26 are rejected under 35 U.S.C. 103(a)

as being obvious over Starr.

18.   As per claim 4, Starr discloses:

The method of claim 1, further comprising: receiving, by the protocol processor, a

request for sending a packet; (page 14, lines 27-28)

Starr does not disclose expressly maintaining a data structure to indicate sessions

capable of processing requests. However, at the time of the invention, it would have

been obvious to a person of ordinary skill in the art to construct a data structure to

identify sessions that are capable of processing requests because it would enable

Starr's protocol processor to track network workload on the host, determine network

traffic in relation to the host, and avoid sending data to a destination that is not ready to

receive the packet.

Starr does not disclose expressly copying the metadata, in response to determining

based at least in part upon the data structure that the request can be associated with a

session that is capable of processing requests. However, at the time of the invention, it

would have been obvious to a person of ordinary skill to copy the metadata related to a

packet to the destination along with the packet, so the packet can be processed

appropriately at the destination.

19.   As per claims 12, 19, and 23, the examiner finds these claims different from

claim 4 only in statutory category. The references and reasons cited for rejection of

claim 4 apply in the same manner as applied to claim 4.

20.   As per claim 5, Starr discloses:

The method of claim 1, further comprising: receiving, by the protocol processor, a

request for sending a packet; (page 14, lines 27-28)

Starr does not disclose expressly maintaining a data structure to indicate sessions

capable of processing requests; determining from the data structure whether the

request can be associated with a session that is capable of processing requests.

However, at the time of the invention, it would have been obvious to a person of

ordinary skill in the art to construct a data structure to identify sessions that are capable

of processing requests because it would enable Starr's protocol processor to track

network workload on the host, determine network traffic in relation to the host, and avoid

sending data to a destination that is not ready to receive the packet.

Starr does not disclose expressly if the request cannot be associated with any session

that is capable of processing the request then queuing the request for later processing.

However, at the time of the invention, it would have been obvious to a person of

ordinary skill to re-queue the request for later processing when no session is capable of

processing the request because information exchange on networks have high-low patterns, and sending a packet at a later time when traffic is low is generally more efficient than generating an error and abandoning the request.

21.   As per claims 13 and 24, the examiner finds these claims different from claim 5 only in statutory category. The references and reasons cited for rejection of claim 5 apply in the same manner as applied to claim 5.

22.   As per claim 7, Starr discloses the method of claim 1, wherein the protocol processor is coupled to the network adapter (page 7, lines 15-18)

wherein the network adapter is an offload engine adapter (page 4, lines 8-15)

Starr does not disclose expressly, "and wherein the host memory is larger in size than the adapter memory". However, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to make host memory larger in size than the adapter memory because host memory in general have to store data from a greater number of software and hardware sources that collectively require greater memory space.

23.   As per claims 15 and 26, the examiner finds these claims different from claim 7 only in statutory category. The references and reasons cited for rejection of claim 7 apply in the same manner as applied to claim 7.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Scott Sun whose telephone number is (571) 272-2675.

The examiner can normally be reached on M-F, 10am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Dov Popovici can be reached on (571) 272-2675. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

SS
July 21, 2005

TAMMARA PEYTON
PRIMARY EXAMINER